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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/498,701 02/07/00 TROST

B 8603-0190.2

EXAMINER

HM12/0714

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DESAILR

ART UNIT

PAPER NUMBER

1625

DATE MAILED:

07/14/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/498,701

Applicant(s)

Trost et al

Examiner

Rita Desai

Group Art Unit

1625



☒ Responsive to communication(s) filed on Feb 7, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 17-23 and 53-56 is/are pending in the applicat

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 17-23 and 53-56 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 1625

### **DETAILED ACTION**

Claims 17-23 and 53-56 are pending.

#### ***Specification***

The specification are objected to as being unclear. See page 8 lines 26 to 33.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17 and 55 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for pyridyl, and solvents such as THF and toluene does not reasonably provide enablement for any and all heterocyclic groups, and groups wherein R1 and R2 are carbocyclic or heterocyclic or may together form a carbocyclic or a heterocyclic groups and all suitable solvents. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims without undue experimentation. Also a catalyst reaction is site specific and the presence of all these various combinations of groups changes the geometry and configurations and the catalyst no longer conforms to the site.

The vaguely defined claims are an invitation for undue experimentation.

In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

Art Unit: 1625

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17,20-23 and 55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is vague and indefinite.

-----The claim recites suitable solvent, without defining what the criteria are. The claim should incorporate the specific solvent. There are numerous solvents available and the specifications describe using THF or THF/toluene, and reciting a suitable solvent is just an invitation for experimentation with all the various aprotic

-----The claim also recites derived from a chiral diamine, diol, or amino alcohol. It is unclear what the applicant means. Is it a derivative of a diamine, diol, or amino alcohol, which are a class of compounds or are they specific diamines or diol or an amino alcohol?

-----It is also unclear that the chiral centers are substituted by X groups, but does not indicate what it is further linked to since -O- and -NR- are not terminal groups.

----The recitation of Cyn comprising a heterocyclic group is an open statement and is unclear which heterocyclic groups applicant has in mind. These are further substituted by hetero groups and further may also be fused to one or more additional ring!!

---- The recitation of a leaving group further makes the claim more indefinite and vague.

Art Unit: 1625

See Ex parte Sizto 9 USPQ2d 2081 (BdPatApp&Int).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-23 and 53-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Trost et al J.Am. Chem. Soc. 1990 , Vol 112 pages 9590-9600; Barry Trost et al, Regiochemical diversity... , pages 4817-4840; Barry Trost et al J.Am. Chem Soc 1987 , Vol 109. Pages 1469-1478, and Barry M. Trost Organometallics 1985, Vol 4 pages 1143-1145 and Barry Trost in Chemoselectivity and stereocontrol teaches a catalytic composition , in a solvent (toluene) using an hexacoordinated Mo attached to an heteroring (bipyridyl) , See whole document see pages 1472, reaction 17, formula 39, 40 , reaction 20 , 21 and 22 on page 1473, 47, 48, 49 on page 1474 reaction 24,25 which use Mo(o) . Barry Trost in Regiochemical diversity also teaches the above components of an catalytic organometallic composition. (See whole document) Barry Trost in Ligand dependence of Mo-catalyzed alkylation uses Molybdenum -isonitrile complexes ( limitation of claim 19).

Art Unit: 1625

All these references use a Molybdenum catalyst only. The instant claims use Tungsten and Chromium also.

Barry Trost and Dennis Murphy Organometallics, 1985 teaches the need of chiral and optically active ligands. The reference also teaches 1,1'-binaphthol which is a limitation of claim 55. The reference also teaches allylic alkylation involving chiral allyl fragments bound to chiral metal templates and also a chiral ligand derived from a diol substituted by an -O-. It also uses the same solvent THF. See formula 4,5, middle of the column on page 1145 and the whole document.

Motivation:- One of ordinary skill in the art would have been motivated to use W or Cr since they would have a reasonable expectation of success since all these metals are from the same group VIB of the periodic table as the Mo and so should show similar properties and also the use of chiral ligands according to Organometallics Vol 4 pages 1143-1145 for the induction of asymmetry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Desai whose telephone number is (703) -305-1868. The examiner can normally be reached on Monday to Friday from 8.00 am to 4.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the supervisor, Mr. John Kight, can be reached on (703) 308-0204.

Art Unit: 1625

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1235 .

R.D.

July 12th. 2000.

*Alan L. Rotman*  
ALAN L. ROTMAN  
PRIMARY EXAMINER